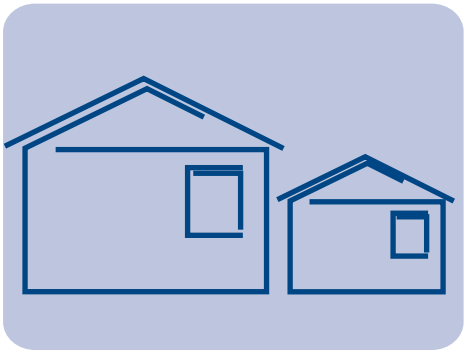
Detached Garage/ Storage Shed Details



CITY OF SCOTTSDALE
ARIZONA

CITY OF SCOTTSDALE SUBMITTAL REQUIREMENTS FOR 18' X 22' Detached Storage Shed/Garage

This information covers the basic requirements for a detached (non habitable) accessory structure for single-family residential lot. A building permit is required for the construction of a detached accessory building, used as a tool or storage shed that exceeds 120 square feet of projected roof area. Any electrical or plumbing that is run to the accessory structure requires a permit regardless of the buildings size. This should not be considered as a complete list of code requirements. Inspections must be passed before the work is considered completed by the City of Scottsdale.

A. DEFINITIONS

1. Accessory building shall mean a building, the use of which is customarily incidental to that of the main building.

B. LOCATION

NOTE: Any accessory building that is located less than 10 feet from the residence is considered an attached structure and must be designed accordingly. It must meet the setback requirements of the City of Scottsdale Zoning ordinance for the main residence. All setbacks are measured from the property lines to the face of the buildings. When measuring between buildings the distance is from face of structure to face of structure, the rooflines are allowed to overhang two feet into the area between the structures.

- A detached accessory building must be a minimum of 10 feet from the main structure and 6 feet from any other structure on the lot.
- Accessory buildings cannot be built in the required front or side yards, (see attached example)
- Accessory buildings cannot be built in any easements that may be on your property, such as a public utility, equestrian or drainage easements. You may check with the City Records Department at 480-312-2356 for the location of any easements that may be on your property.
- Accessory buildings that are 10 feet or less in height (to the highest point of the roof) may be 2 feet from the property line. NOTE: There are additional Building Code requirements that must be met for structures that are within 3 feet of a residential property line. If this will apply to your building, please call 480-312-7083 for additional Building Code information.
- For every additional foot of building height over 10 feet you must add an additional foot of setback from the property lines. Example: A detached building 14-foot tall

would have to be 10 feet from the house, and 6 feet from the property lines (2' for the first 10' and 4' for the additional height).

- Accessory buildings used a garage or carport with access from an alley, shall not be located closer than fifteen (15) feet to the centerline of the alley. An additional foot of setback must be provided for each foot of building height above twelve (12) feet.
- Accessory structures cannot cover more that thirty (30%) percent of the rear yard

C. PERMIT AND PLAN REQUIRMENTS

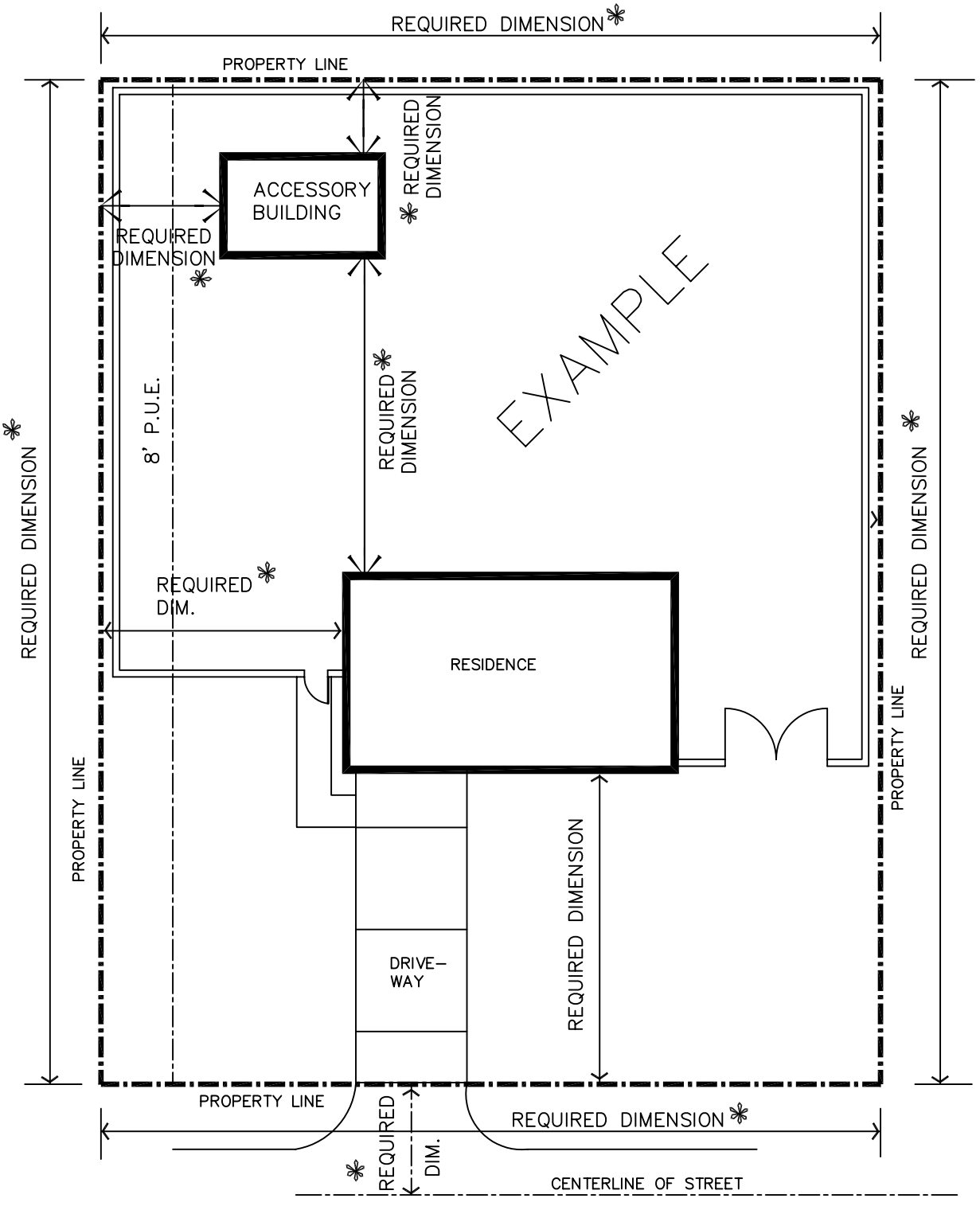
- Plot plan-provide a plot plan (see attached example) showing the streets, property lines, lot dimensions, location of the new and the existing structures on the lot and the setback dimensions from property lines and structures. You may check with the City Records Department (480-312-2356) to see if there is an existing site plan on file for your property. If one is not available, you can get a copy of your subdivision lot showing the lot dimensions and any easements that may be on your property.
- Building plans-the attached building plans are for your use in constructing a building that is eighteen (18) feet wide by twenty two (22) feet deep. You may not use these details to construct a habitable structure or exceed the building dimensions that are given. If these dimensions do not meet your needs then plans must be designed and submitted for review and approval.

D. INSPECTION REQUIREMENTS

You will be provided an inspection card that will list and detail the required inspections. The following list is for your information and may vary depending on what you will be including in your building.

- A pre site inspection
- A lowest floor inspection (pad and slab height)
- An exterior footing inspection. NOTE: if providing electrical or plumbing you will also need underground electrical, sewer and water line inspections
- A stem wall inspection
- A rough framing inspection NOTE: if you are providing electrical or plumbing to the building you will also need rough electrical and plumbing inspections
- A roof deck, strap and shear inspection
- Wall board/drywall inspection (if being installed)
- Final inspections will be required by the Building, Site and Survey Inspection Departments.

PHONE NUMBERS		**ABBREVIATIONS**
Inspection Services	480-312-5750	W/N = WITHIN
Development Services-		O.C. = ONCENTER
Planning and Zoning Div.	480-312-7083	PRESS. = PRESSURE TREATED
Automated Inspection		P.U.E. = PUBLIC UTILITY
Request Line	480-312-5796	EASEMENT



PROVIDE :
ADDRESS AND ASSESSORS PARCEL NUMBER OF PROJECT

DIMENSIONS OF PROPERTY AND EASEMENTS AVAILABLE FROM RECORDS DEPT. DIMENSIONS FROM PROPERTY LINES AND ALL EXISTING STRUCTURES, WALLS AND SWIMMING POOLS

SHOW LOCATION AND SIZE OF ALL DRAINAGE OPENINGS IN BLOCK WALLS

TYPICAL SITE PLAN

N NORTH ARROW

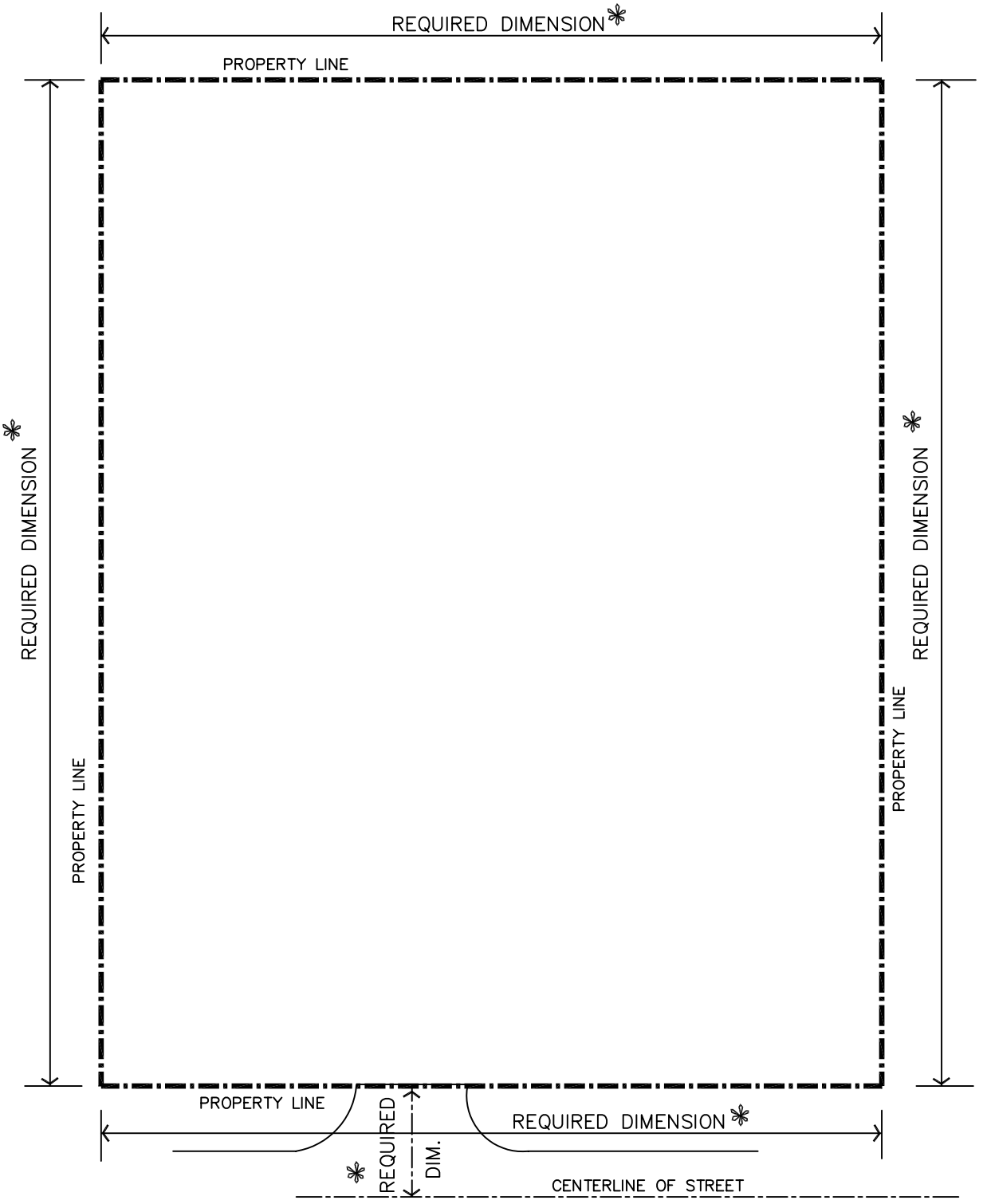
FEMA BLOCK

Flood Insurance Rate Map (FIRM) Information

Community No.	Panel No. / Date	Suffix	Date of FIRM	FIRM Zone	Base Flood Elev.	(In AO zone, give depth and velocity)

(For Areas Under Study Or Preliminary F.I.R.M.)

Source of Map	Date of Map	Flood Zone	Base Flood Elevation	(In AO Zone, give depth and velocity. No habitable floors are permitted below lowest floor elevation)



PROVIDE :
ADDRESS AND
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DIMENSIONS OF
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WALLS AND
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SHOW LOCATION
AND SIZE OF ALL
DRAINAGE
OPENINGS
IN BLOCK WALLS

TYPICAL SITE PLAN

N NORTH ARROW

FEMA BLOCK

Flood Insurance Rate Map (FIRM) Information

Community No.	Panel No. / Date	Suffix	Date of FIRM	FIRM Zone	Base Flood Elev.	(In AO zone, give depth and velocity)

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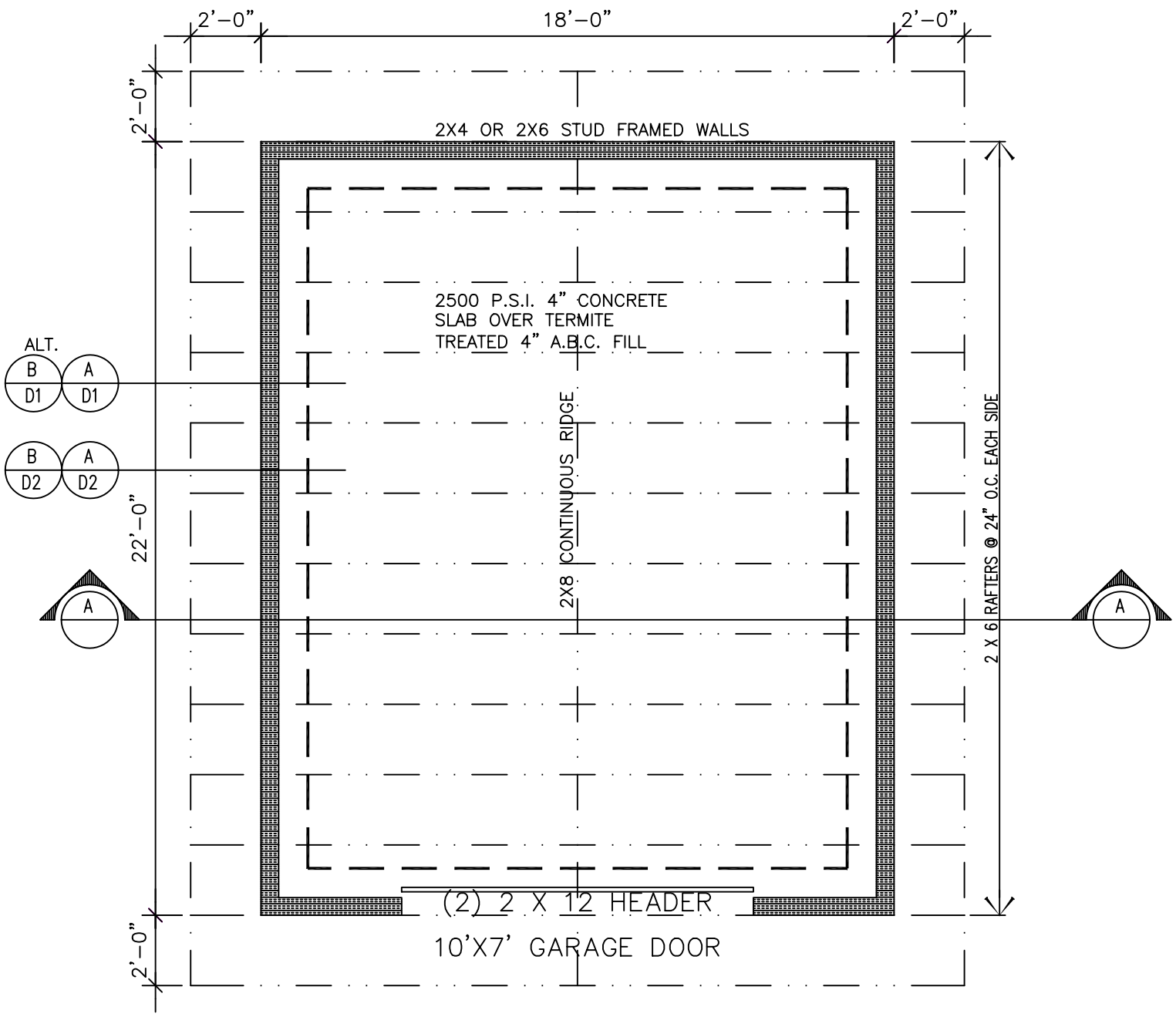
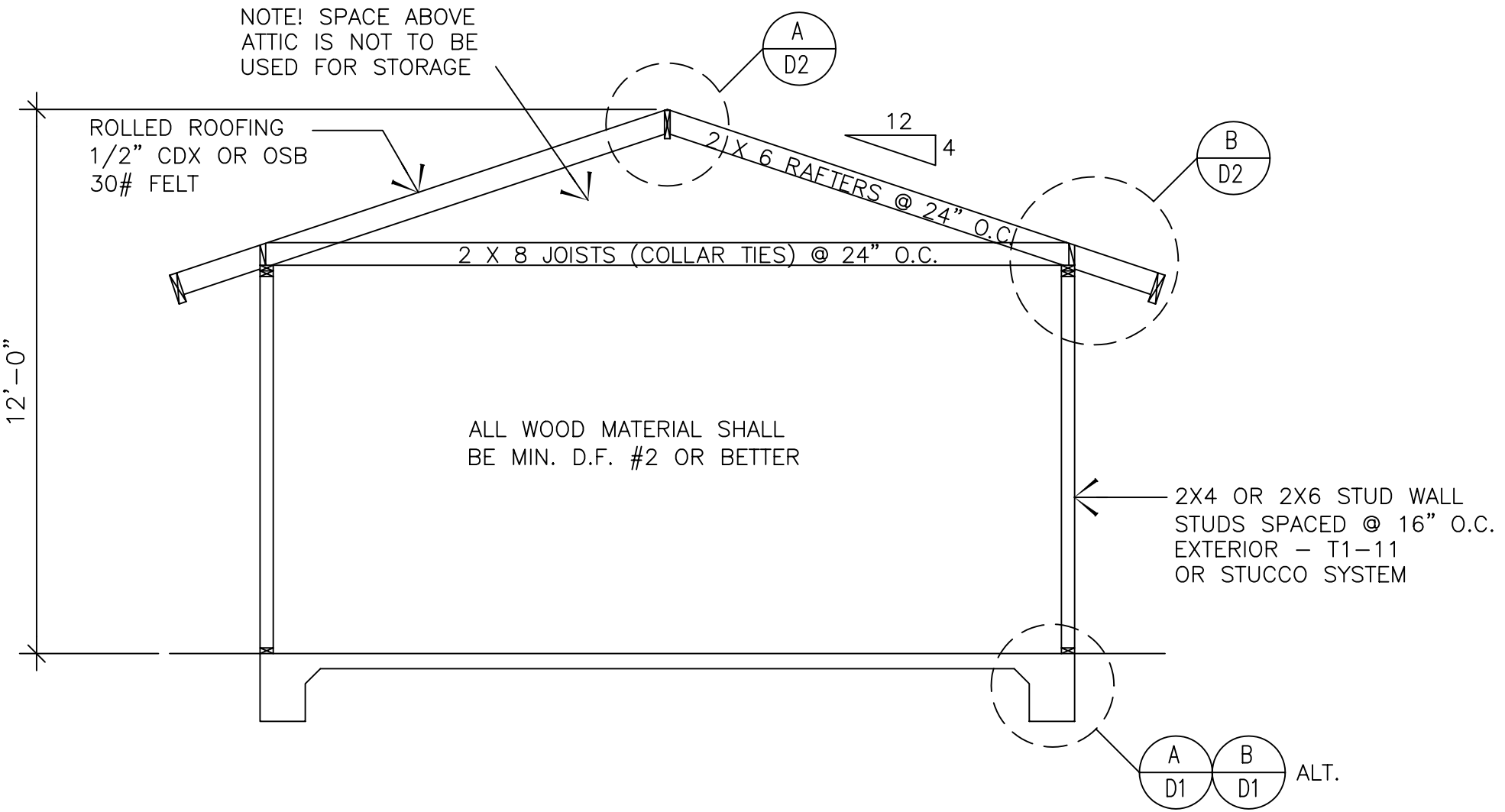


18'X22' DETACHED FREESTANDING GARAGE / STORAGE SHED

FLOOR/FOUNDATION/FRAMING PLAN

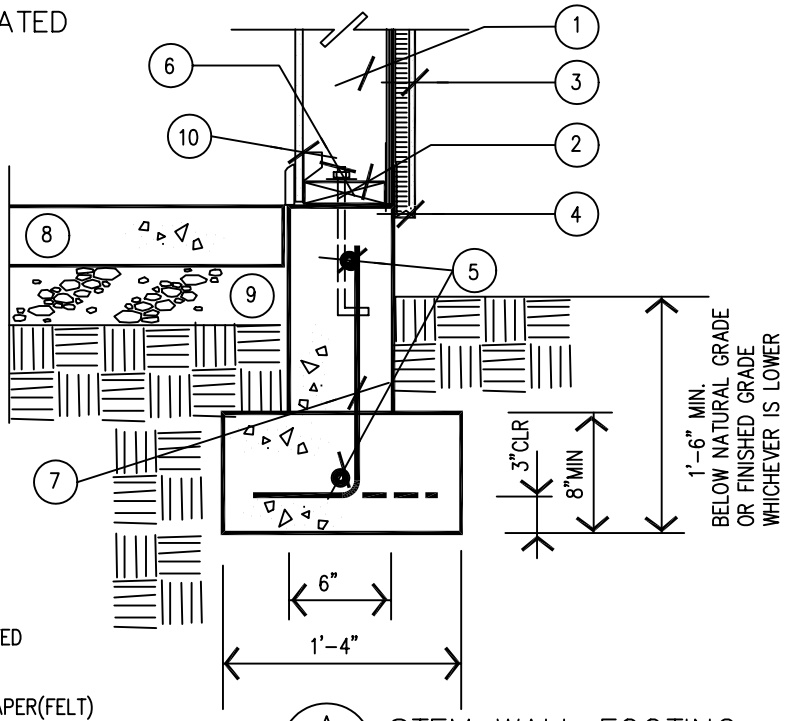
NOT TO SCALE


NOTE! SPACE ABOVE ATTIC IS NOT TO BE USED FOR STORAGE
A
D2
ROLLED ROOFING
1/2" CDX OR OSB
30# FELT
12
4
2 X 6 RAFTERS @ 24" O.C.
B
D2
2 X 8 JOISTS (COLLAR TIES) @ 24" O.C.
12'-0"
ALL WOOD MATERIAL SHALL
BE MIN. D.F. #2 OR BETTER
2X4 OR 2X6 STUD WALL
STUDS SPACED @ 16" O.C.
EXTERIOR - T1-11
OR STUCCO SYSTEM
A
D1
B
D1
ALT.

SECTION A-A

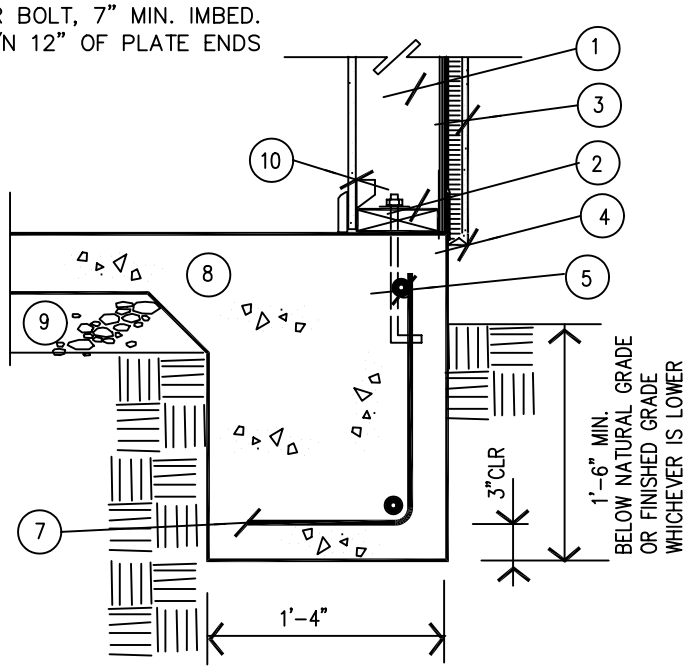
ABBREVIATIONS

PRESS. = PRESSURE TREATED
O.C. = ON CENTER
W/N = WITHIN



A — STEM WALL FOOTING

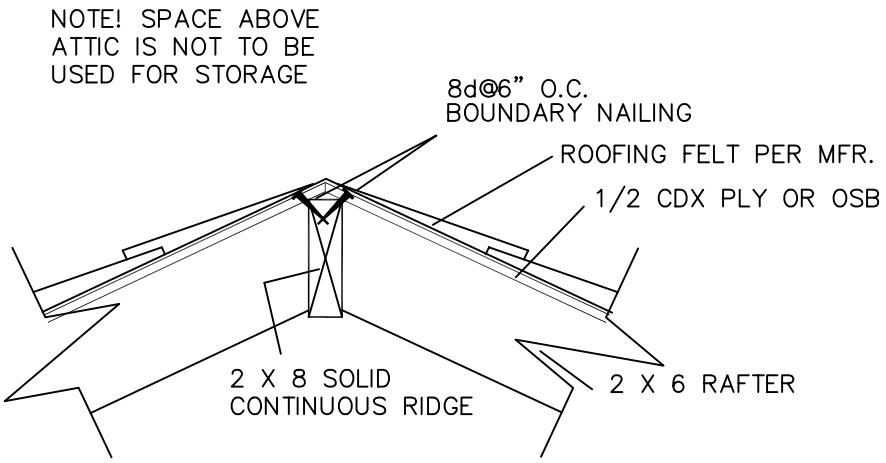
1. 2X4 OR 2X6 STUDS
2. 2X_ PLATE–FOUNDATION REDWOOD OR PRESS. TREATED
3. T1–11 OR STUCCO SYSTEM OVER MIN. 15# BUILDING PAPER(FELT)
4. WEEP SCREED @ STUCCO 3/4" BELOW FIN.FL.
5. #4 CONT. TOP & BOTT.
6. 1/2"X10" ANCHOR BOLT, 7" MIN. IMBED. @ 48" O.C. & W/N 12" OF PLATE ENDS
7. #4 ⌊ @48" O.C. ALT. BEND
8. 2500 PSI CONCRETE
9. 4" COMPACTED ABC
10. H2.5 ALT. STUDS



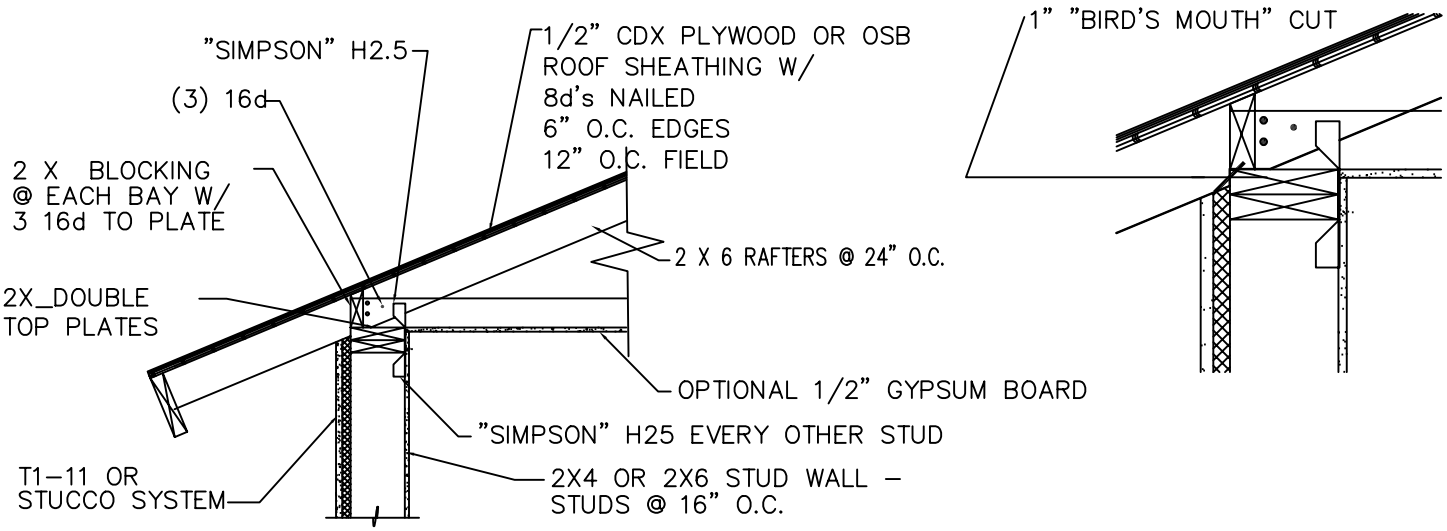
B — MONOLITHIC FOOTING

D1–EXTERIOR WALL FOOTING DETAILS

NOT TO SCALE



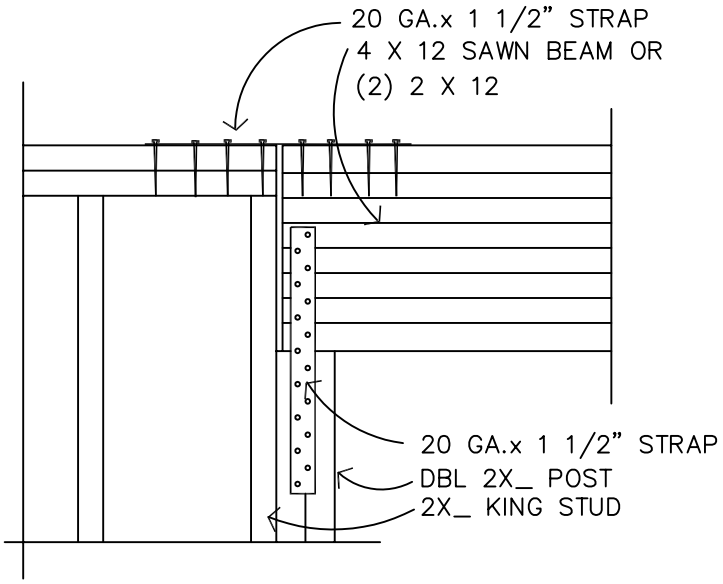
A — RIDGE CONNECTIONS



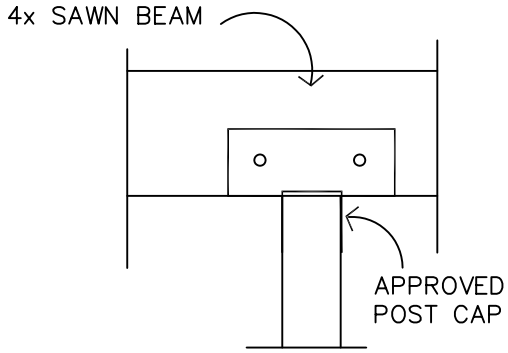
B — EAVE CONNECTIONS

D2-FRAMING DETAILS

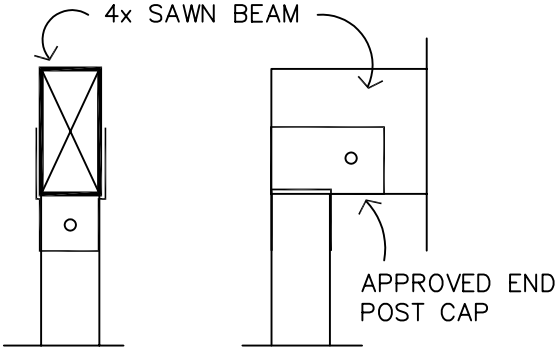
NOT TO SCALE



BEAM TO FRAME
WALL CONNECTION

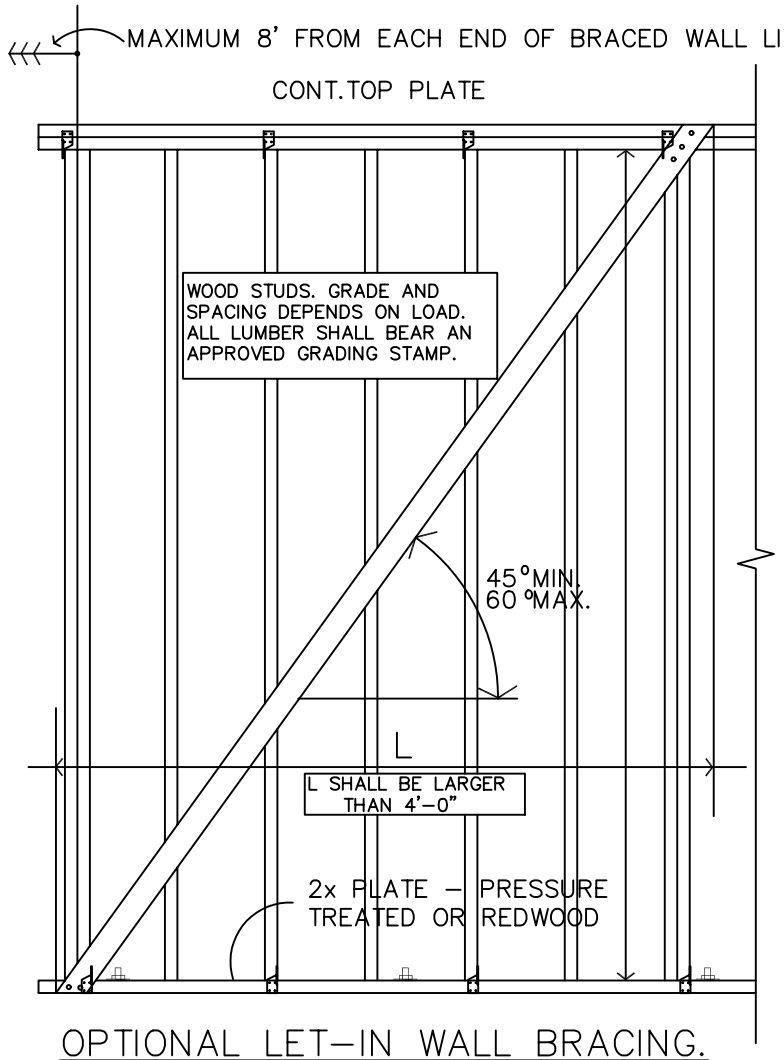


POST AND BEAM

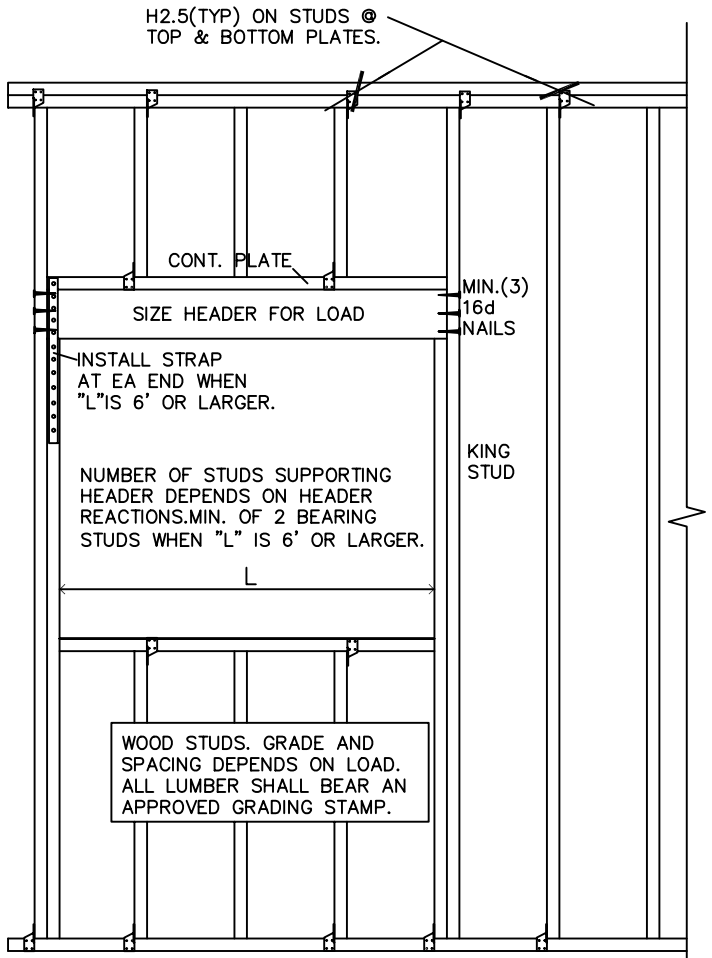


END POST AND BEAM

BEAM CONNECTIONS



OPTIONAL LET–IN WALL BRACING.

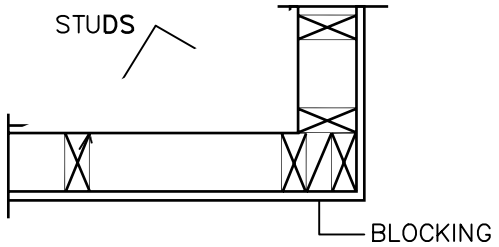


TYPICAL HEADER IN WOOD STUD WALL

EXTERIOR WALLS OF ONE STORY WOOD FRAME BUILDINGS SHALL BE CONSRUCTED WITH 2X4 OR 2X6 STUDS SPACED NOT MORE THAN 24" OC, SUPPORTING ROOF AND CEILING ONLY WITH MAXIMUM HEIGHT OF 10'.

THE EXTERIOR SIDE OF ALL EXTERIOR WALLS SHALL BE BRACED AT EACH END OF CORNERS AND EVERY 25' MAXIMUM

WHERE BRACING LET–IN CANNOT BE UTILIZED DUE TO OPENINGS, PROVIDE MINIMUM 3/8" PLYWOOD SHEATHING FROM THE CORNER TO 4' BEYOND THE WALL OPENING OR THE NEXT CORNER



TYPICAL WALL CORNER

TYPICAL WALL FRAMING

TABLE R602.3(1)
FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

DESCRIPTION OF BUILDING ELEMENTS		NUMBER AND TYPE OF FASTENER[a,b,c,d]	SPACING OF FASTENERS
Joist to sill or girder, toe nail		3-8d	—
1″ × 6″ subfloor or less to each joist, face nail		2-8d 2 staples, $1^3/_4$″	— —
2″ subfloor to joist or girder, blind and face nail		2-16d	—
Sole plate to joist or blocking, face nail		16d	16″ o.c.
Top or sole plate to stud, end nail		2-16d	—
Stud to sole plate, toe nail		3-8d or 2-16d	—
Double studs, face nail		10d	24″ o.c.
Double top plates, face nail		10d	24″ o.c.
Sole plate to joist or blocking at braced wall panels		3-16d	16″ o.c.
Double top plates, minimum 24-inch offset of end joints, face nail in lapped area		8-16d	—
Blocking between joists or rafters to top plate, toe nail		3-8d	—
Rim joist to top plate, toe nail		8d	6″ o.c.
Top plates, laps at corners and intersections, face nail		2-10d	—
Built-up header, two pieces with $^1/_2$″ spacer		16d	16″ o.c. along each edge
Continued header, two pieces		16d	16″ o.c. along each edge
Ceiling joists to plate, toe nail		3-8d	—
Continuous header to stud, toe nail		4-8d	—
Ceiling joist, laps over partitions, face nail		3-10d	—
Ceiling joist to parallel rafters, face nail		3-10d	—
Rafter to plate, toe nail		2-16d	—
1″ brace to each stud and plate, face nail		2-8d 2 staples, $1^3/_4$″	— —
1″ x 6″ sheathing to each bearing, face nail		2-8d 2 staples, $1^3/_4$″	— —
1″ x 8″ sheathing to each bearing, face nail		2-8d 3 staples, $1^3/_4$″	— —
Wider than 1″ x 8″ sheathing to each bearing, face nail		3-8d 4 staples, $1^3/_4$″	— —
Built-up corner studs		10d	24″ o.c.
Built-up girders and beams, 2-inch lumber layers		10d	Nail each layer as follows: 32″ o.c. at top and bottom and staggered. Two nails at ends and at each splice.
2″ planks		2-16d	At each bearing
Roof rafters to ridge, valley or hip rafters: toe nail face nail		 4-16d 3-16d	 — —
Rafter ties to rafters, face		3-8d	—
Wood structural panels, subfloor, roof and wall sheathing to framing, and particleboard wall sheathing to framing			
$^5/_{16}$″-$^1/_2$″	6d common nail (subfloor, wall) 8d common nail (roof)[f]	6	12[g]
$^{19}/_{32}$″ -1″	8d common nail	6	12[g]
$1^1/_8$″-$1^1/_4$″	10d common nail or 8d deformed nail	6	12

(continued)

TABLE R602.3(1)—continued
FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

DESCRIPTION OF BUILDING MATERIALS	DESCRIPTION OF FASTENER[b,c,d,e]	SPACING OF FASTENERS	
		Edges (inches)[i]	Intermediate supports[c,e] (inches)
Other wall sheathing[h]			
1/2" regular cellulosic fiberboardsheathing	1 1/2" galvanized roofing nail 6d common nail staple 16 ga., 1 1/2 long	3	6
1/2" structural cellulosic fiberboard sheathing	1 1/2" galvanized roofing nail 8d common nail staple 16 ga., 1 1/2 long	3	6
25/32" structural cellulosic fiberboard sheathing	1 3/4" galvanized roofing nail 8d common nail staple 16 ga., 1 3/4 long	3	6
1/2" gypsum sheathing	1 1/2" galvanized roofing nail; 6d common nail; staple galvanized, 1 1/2" long; 1 1/4" screws, Type W or S	4	8
5/8" gypsum sheathing	1 3/4" galvanized roofing nail; 8d common nail; staple galvanized, 1 5/8" long; 1 5/8" screws, Type W or S	4	8
Wood structural panels, combination subfloor underlayment to framing			
3/4" and less	6d deformed nail or 8d common nail	6	12
7/8"-1"	8d common nail or 8d deformed nail	6	12
1 1/8"-1 1/4"	10d common nail or 8d deformed nail	6	12

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 1.609 km/h.

a. All nails are smooth-common, box or deformed shanks except where otherwise stated. Nails used for framing and sheathing connections shall have minimum average bending yield strengths as shown: 80 ksi (551 MPa) for shank diameter of 0.192 inch (20d common nail), 90 ksi (620 MPa) for shank diameters larger than 0.142 inch but not larger than 0.177 inch, and 100 ksi (689 MPa) for shank diameters of 0.142 inch or less.

b. Staples are 16 gage wire and have a minimum 7/16-inch on diameter crown width.

c. Nails shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater.

d. Four-foot-by-8-foot or 4-foot-by-9-foot panels shall be applied vertically.

e. Spacing of fasteners not included in this table shall be based on Table R602.3(1).

f. For regions having basic wind speed of 110 mph or greater, 8d deformed nails shall be used for attaching plywood and wood structural panel roof sheathing to framing within minimum 48-inch distance from gable end walls, if mean roof height is more than 25 feet, up to 35 feet maximum.

g. For regions having basic wind speed of 100 mph or less, nails for attaching wood structural panel roof sheathing to gable end wall framing shall be spaced 6 inches on center. When basic wind speed is greater than 100 mph, nails for attaching panel roof sheathing to intermediate supports shall be spaced 6 inches on center for minimum 48-inch distance from ridges, eaves and gable end walls; and 4 inches on center to gable end wall framing.

h. Gypsum sheathing shall conform to ASTM C 79 and shall be installed in accordance with GA 253. Fiberboard sheathing shall conform to either AHA 194.1 or ASTM C 208.

i. Spacing of fasteners on floor sheathing panel edges applies to panel edges supported by framing members and at all floor perimeters only. Spacing of fasteners on roof sheathing panel edges applies to panel edges supported by framing members and at all roof plane perimeters. Blocking of roof or floor sheathing panel edges perpendicular to the framing members shall not be required except at intersection of adjacent roof planes. Floor and roof perimeter shall be supported by framing members or solid blocking.

TABLE R602.3(2)
ALTERNATE ATTACHMENTS

NOMINAL MATERIAL THICKNESS (inches)	DESCRIPTION[a, b] OF FASTENER AND LENGTH (inches)	SPACING[c] OF FASTENERS	
		Edges (inches)	Intermediate supports (inches)
Wood structural panels subfloor, roof and wall sheathing to framing and particleboard wall sheathing to framing[f]			
5/16	0.097 - 0.099 Nail 1 1/2 Staple 15 ga. 1 3/8 Staple 16 ga. 1 3/4	6	12
3/8	Staple 15 ga. 1 3/8	6	12
	0.097 - 0.099 Nail 1 1/2	4	10
	Staple 16 ga. 1 3/4	6	12
15/32 and 1/2	Staple 15 ga. 1 1/2	6	12
	0.097 - 0.099 Nail 1 5/8	3	6
	Staple 16 ga. 1 3/4	6	12
19/32 and 5/8	0.113 Nail 1 7/8 Staple 15 and 16 ga. 1 5/8	6	12
	0.097 - 0.099 Nail 1 3/4	3	6
23/32 and 3/4	Staple 14 ga. 1 3/4	6	12
	Staple 15 ga. 1 3/4	5	10
	0.097 - 0.099 Nail 1 7/8	3	6
	Staple 16 ga. 2	4	8
1	Staple 14 ga. 2	5	10
	0.113 Nail 2 1/4, Staple 15 ga. 2	4	8
	0.097 - 0.099 Nail 2 1/8	3	6
NOMINAL MATERIAL THICKNESS (inches)	DESCRIPTION[a,b] OF FASTENER AND LENGTH	SPACING[c] OF FASTENERS	
		Edges (inches)	Body of panel (inches)
Floor underlayment; plywood-hardboard-particleboard[f]			
Plywood			
1/4 and 5/16	1 1/4 ring or screw shank nail—minimum 12 1/2 ga. (0.099") shank diameter	3	6
	Staple 18 ga., 7/8, 3/16 crown width	2	5
11/32, 3/8, 15/32 and 1/2	1 1/4 ring or screw shank nail—minimum 12 1/2 ga. (0.099) shank diameter	6	8[e]
19/32, 5/8, 23/32 and 3/4	1 1/2 ring or screw shank nail—minimum 12 1/2 ga. (0.099) shank diameter	6	12
	Staple 16 ga. 1 1/4	6	8
Hardboard[f]			
0.200	1 1/2 long ring-grooved underlayment nail	6	6
	4d cement-coated sinker nail	6	6
	Staple 18 ga., 7/8 long (plastic coated)	3	6
Particleboard			
1/4	4d ring-grooved underlayment nail	3	6
	Staple 18 ga., 7/8 long, 3/16 crown	3	6
3/8	6d ring-grooved underlayment nail	6	10
	Staple 16 ga., 1 1/8 long, 3/8 crown	3	6
1/2, 5/8	6d ring-grooved underlayment nail	6	10
	Staple 16 ga., 1 5/8 long, 3/8 crown	3	6

For SI: 1 inch = 25.4 mm.

a. Nail is a general description and may be T-head, modified round head or round head.

b. Staples shall have a minimum crown width of 7/16-inch on diameter except as noted.

c. Nails or staples shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater. Nails or staples shall be spaced at not more than 12 inches on center at intermediate supports for floors.

d. Fasteners shall be placed in a grid pattern throughout the body of the panel.

e. For 5-ply panels, intermediate nails shall be spaced not more than 12 inches on center each way.

f. Hardboard underlayment shall conform to ANSI/AHA A135.4.